Appendix G

Key Largo Cultural Resources Consultation Correspondence

FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Administrative Services
Division of Corporations
Division of Cultural Affairs

MEMBER OF THE FLORIDA CABINET
Division of Library & Information Services
Division of Historical Resources
Ringling Museum of Art
Division of Licensing
Division of Elections

FLORIDA DEPARTMENT OF STATE
DIVISION OF HISTORICAL RESOURCES

July 3, 2000

Ms. Science Kilner
Federal Emergency Management Agency
310 Mutual Boulevard
Town of Princeville, NC 27886

Dear Ms. Kilner:

In response to your inquiry of July 3, 2000, the Florida Master Site File lists nine previously recorded archaeological resource in the following parcel:

T61S, R39E, Sections 27,28.

In interpreting the results of our search, please remember the following points:

- Areas which have not been completely surveyed, such as yours, may contain unrecorded archaeological sites or historical structures.
- While many of our records relate to historically significant properties, the entry of an archaeological site or an historical structure on the Florida Master Site File does not necessarily mean that the structure is significant.
- Since vandalism is common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.
- **As you may know, federal and state laws require formal environmental review for some projects. Record searches by the staff of the Florida Master Site File do not constitute such a review. If your project falls under these laws, you should contact the Compliance Review Section of the Bureau of Historic Preservation at 850-487-2333 or at this address.**

If you have any further questions concerning the Florida Master Site File, please contact us as below.

Sincerely,

John Turner, 850-487-2299
Data Analyst, Florida Master Site File
Division of Historical Resources
R. A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

State SunCom: 277-2299
Fax line: 850-921-0372
Email: *fmsfile@mail.dos.state.fl.us*
Web: *http://www.dos.state.fl.us/dhr/msf/*

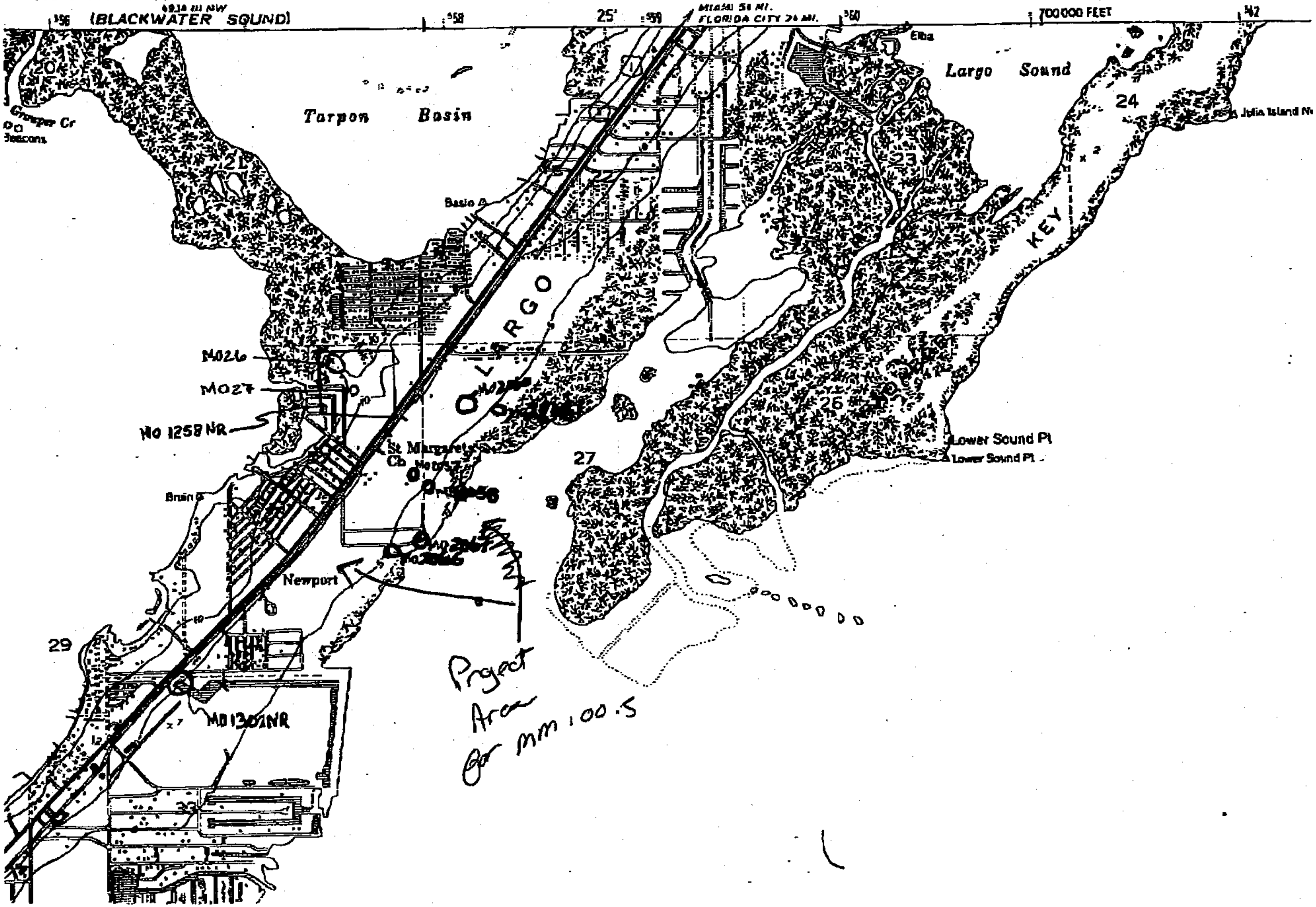
CULTURAL RESOURCES REPORT

SITEID	FORMNO	T-R-S	CR	SITENAME	NRLIST	SURVEY	LOCATION	OTHER
M000026	MELB	61S/39E/28	AR	ROCK MOUND 1 (MIDDEN) KEY LARGO	Listed		Map: ROHA	Culture: GL2A, GL2B, GL3, GL3B Sitetype: MIDD, MOUN
M000027	MELB	61S/39E/28	AR	ROCK MOUND 2 (ROCK MOUND) (KEY LARGO 3)	Listed		Map: ROHA	Culture: GL, GL3 Sitetype: MIOD, MOUN
M001258	199509	61S/39E/28	AR	ROCK MOUND ARCHAEOLOGICAL SITE	Listed	4848	Map: ROHA	Culture: 20TH, GL1B, GL2A, GL2B, GL2C, G Sitetype: FEAT, HABI, LAND, MDSH, MOUN,
M002057	MELB	61S/39E/28	AR	ROSE MARIE			Map: ROHA	Culture: AMER, BOOM, DEPR, SPAN, WW1A Sitetype: CIST, MALL
M002058	MELB	61S/39E/27	AR	GUN RANGE CISTERN			Map: ROHA	Culture: AMER, POSR, SPAN, WW1A Sitetype: CIST, HOUS, REFU
M002060	MELB	61S/39E/27	AR	NEWPORT PLANTATION			Map: ROHA	Culture: AMER, POSR, SPAN, WW1A Sitetype: CIST, HOUS, REFU
M002061	MELB	61S/39E/27	AR	THORN			Map: ROHA	Culture: GL2, GL3 Sitetype: MDSH, MIDD, SCAR, SCLI
M002066	MELB	61S/39E/28	AR	NEWPORT			Map: ROHA	Culture: HIST, POSR, PREH, SPAN, WW1A Sitetype: MDSH, REFU, SCAR
M002067	MELB	61S/39E/28	AR	SWINE			Map: ROHA	Culture: AMER, POSR, SPAN, WW1A Sitetype: CIST, HOUS, REFU

9 site(s) evaluated; 9 form(s) evaluated.
Print date: 7/3/00 2:40:26 PM

UNITED STATES
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

ROCK HARBOR QUAD
FLORIDA-MONROE,
7.5 MINUTE SERIES (TOPO



URS

4005 Windward Plaza Drive
Suite 570
Alpharetta, GA 30005
Tel: (770) 777-7417
Fax: (770) 777-7491

Offices Worldwide

January 26, 2001

Ms. Laura Kammerer
Florida Department of State
Division of Historical Resources
500 South Bruno Street, Room 402
Tallahassee, Florida 32399-0250
(850) 487-2333

Subject: Formal Consultation on the Proposed Key Largo Wastewater Treatment Facility Site at Key Largo, Monroe County, Florida

Dear Ms. Kammerer:

URS Group, Inc. (URS), on behalf of the Federal Emergency Management Agency (FEMA) and the Florida Keys Aqueduct Authority (FKAA) is conducting an Environmental Assessment (EA) of an approximately 20 acres tract of land in Key Largo, Monroe County, Florida for use as a Wastewater Treatment Facility. The project site can be further described as being located on the eastern side of US Hwy. 1 at Mile Marker 100.5 on the island of Key Largo.

In compliance with NEPA, URS requests information on cultural resources within or near the project area including, but not limited to National Register listed or eligible properties, National Historic Landmarks, and Traditional Cultural Properties. In support of your review of this project, please find the enclosed materials:

- A topographic map outlining the Project Site.
- 35mm photographs of the project site and immediate vicinity.
- A detailed description of the project site and a preliminary cultural resources reconnaissance survey conducted by Nick Bon-Harper in January 2001.

Your review comments on this project would be greatly appreciated and will be incorporated into this assessment.

If you need additional information, please call me at (770) 777-7417.

Very Truly Yours,

Heather M. Colston

Heather M. Colston
Staff Archaeologist

Enclosures

OPTIONAL FORM 99 (7-90) 11/16/03

FAX TRANSMITTAL # of pages ►

To Steve Carmuth	From Jeana
Dept./Agency	Phone #
Fax # 301 309 1579	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Cultural Resources Reconnaissance Survey of the Proposed Key Largo Wastewater Treatment Plant Site, Key Largo, Florida

A cultural resources reconnaissance survey was conducted on January 10, 2001, by Nick Bon-Harper. The aim of this survey was to identify visible cultural resources and assess the necessity for an intensive archaeological survey.

Description of Area:

The project area is located on the eastern side of US1 at mile marker 100.5 on the island of Key Largo. The project area covers approximately 20 acres in the form of a right-angle triangle, whose hypotenuse is marked by US1. From US1 the eastern boundary follows Central Avenue due south for approximately 400 meters. It then continues for a further 100 meters on the same line following an overgrown trackway. The Southern boundary runs due east along the northern perimeter of the Florida Keys Aqueduct Agency (FKAA) maintenance depot for 200 meters then continues on the same line along an overgrown track way for an additional 200 meters until it meets with the eastern perimeter. A small (50 x 50m) extension of the main project area protrudes from the southern perimeter along the eastern boundary of the FKAA depot Almost the entire area is covered with dense semi-tropical vegetation. No sources of potable water occur in the project area

Survey Methodology:

The area was surveyed at 50 meter intervals along 10 east-west transects. Transect 1 being defined by the southern boundary. Soil conditions, signs of disturbance and any visible evidence of cultural resources were noted. In addition to the ten transects, the small extension along the southern boundary was surveyed and the perimeter of the area was also inspected.

Results:

1) A significant portion of the project area has been subject to major disturbance. This disturbance is focused mainly in the southern third of the project area, but also occurs along the entire project boundary. The perimeter disturbance extends 10-15 meters into the project area, generally in the form of bulldozed piles of rock probably associated with the clearing of tracks and roadways. In addition to the bulldozer piles, numerous dumps of tires, construction and domestic waste occur particularly along the trackways bounding the southeast corner of the project. Along the southern boundary bulldozing disturbance extended up to 50 meters into the project area.

A number of large depressions were noted along the in the southwestern quadrant. These 'pits' were typically 10 to 15 meters in diameter and extended approximately 1meter into the bedrock, which was at or near surface in all cases. All were flat bottomed with gently sloping sides. These pits appear to be of 'recent' date, the edges are still clearly defined

and bedrock is visible in all. It is thought probable the pits were mechanically excavated to provide material for road construction.

A number of smaller pits occur across the project area. These smaller pits are typically 1-3 meters in diameter and 0.5 – 1 meter deep. Fractured bedrock was noted in and around all of these pits. The vast majority of these smaller pits appear to have been formed by tree falls.

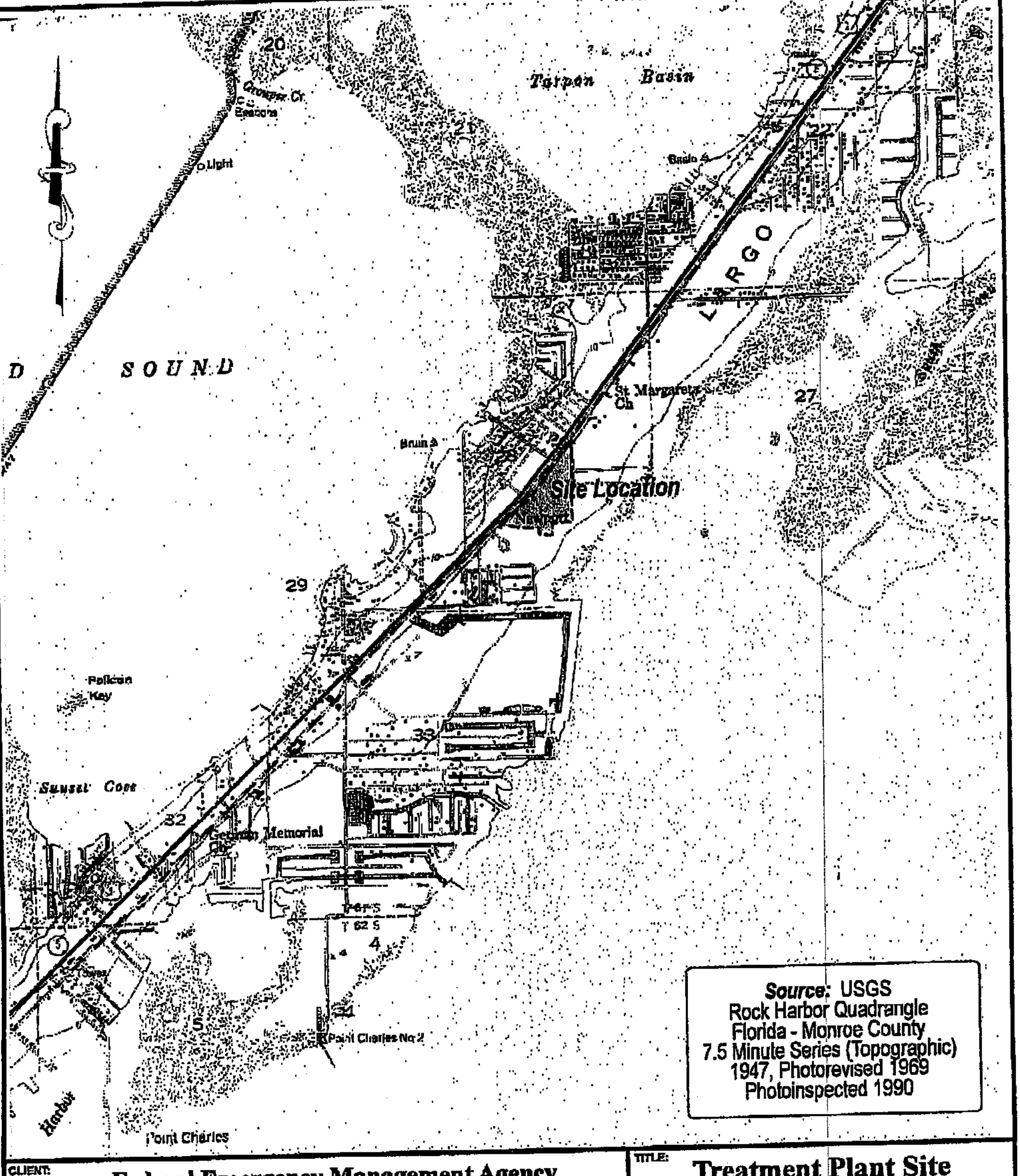
2) Soils throughout the area are extremely thin (50 –75mm). Fractured bedrock is apparent at the surface across the entire area and parent material is exposed along the trackways and outcrops frequently in the southern half of the project area.

3) One *possible* habitation site was noted approximately 50 meters north of the FKAA depot. A small clearing approximately 10 meters across marked this site. Bulldozed piles of rock, along with construction materials and domestic refuse surrounded the clearing. Two fiberglass boats were abandoned in the clearing. The assemblage *may* indicate a habitation site, although it may well mark represent more illegal dumping of trash, and construction waste. All materials and artifacts noted could be dated to the 2nd half of the 20th century.

4) The only other signs of occupation were several itinerant camps in the northern third of the project area. At least two of these campsites are currently occupied, while others appear to have been inhabited until recently.

Conclusions and Recommendations:

Much of the project area has been affected by significant disturbance mainly in the form of bulldozing to clear roadways and tracks. Several large pits in the southwest of the area probably indicate 'borrowing' activity also associated with road construction. Soils across the area are thin, especially in the south were bedrock outcrops are frequent. A small clearing and associated debris in the south of the project area *may* indicate a habitation site dating to the 2nd half of the 20th century. However there are no in-situ remains and it is equally possible that the features represent illegal dumping of construction and domestic waste, which was frequently noted in other areas. The absence of visible cultural resources and the highly deflated soils and the lack of potable water indicate that there is a very low probability of significant cultural resources occurring within the project area. Therefore no further archaeological survey is recommended.



CLIENT: Federal Emergency Management Agency		TITLE: Treatment Plant Site Vicinity Map	
PROJECT: Key Largo Wastewater Improvement Project			
REVISION NO.:	DESIGNED BY: J. Anderson	URS	PROJ NO.: 89FL95441.00
SCALE: Approximate Scale 1"=2000'	DRAWN BY: J. Anderson		TASK: .00100
FILE: E:\Projects\FEMA\Fl Keys\KLargoSitemap.ai	CHECKED BY: K. Branton		FIGURE: 1.1

Page 1

Ent D (FMSF only) / /

Survey Log Sheet

Florida Master Site File
Version 2.0 9/97

Survey # (FMSF only)

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Survey Project (Name and project phase) Key Largo Wastewater Treatment Plant, Florida
Report Title (exactly as on title page) Supplemental Environmental Assessment; FEMA 1249-DR-FL Unmet Needs

Report Author(s) (as on title page– individual or corporate; last names first) URS Corporation

Publication Date (year) 2001 Total Number of Pages in Report (Count text, figures, tables, not site forms) N/A
Publication Information (If relevant, series and no. in series, publisher, and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*: see *Guide to the Survey Log Sheet*.) URS Corporation. 2001. *Supplemental Environmental Assessment: FEMA 1249-DR-FL Unmet Needs.* URS Corporation, Alpharetta, Georgia. Submittal to FEMA Region IV. Forthcoming.

Supervisor(s) of Fieldwork (whether or not the same as author[s]; last name first) Bon-Harper, Nicholas and Cassedy, Daniel F., Ph.D.
Affiliation of Fieldworkers (organization, city) URS Corporation, Raleigh, North Carolina
Key Words/Phrases (Don't use the county, or common words like *archaeology*, *structure*, *survey*, *architecture*. Put the most important first. Limit each word or phrase to 25 characters.) Key Largo Wastewater Treatment Plant

Survey Sponsors (corporation, government unit, or person who is directly paying for fieldwork)
Name Federal Emergency Management Agency, Region IV
Address/Phone 3003 Chamblee-Tucker Road, Atlanta, Georgia 30341, (770) 220-3422
Recorder of *Log Sheet* Colston, Heather M. Date *Log Sheet* Completed 05 / 09 / 2001
Is this survey or project a continuation of a previous project? ❑ No ✖ Yes: Previous survey #(s) (FMSF only)

Counties (List each one in which field survey was done - do not abbreviate; use supplement sheet if necessary)
Monroe County

USGS 1:24,000 Map(s) : Map Name/Date of Latest Revision (use supplement sheet if necessary):
Rock Harbor Quadrangle, 7.5 Minute Series, 1947, Photorevised 1969, Photoinspected 1990

Dates for Fieldwork: Start 01 / 10 / 2001 End 01 / 10 /2001 Total Area Surveyed (fill in one) _____ hectares ~20 acres
Number of Distinct Tracts or Areas Surveyed 1
If Corridor (fill in one for each): Width _____ meters _____ feet Length _____ kilometers _____ miles

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State

DIVISION OF HISTORICAL RESOURCES

May 16, 2001

Ms. Heather M. Colston
URS
4005 Windward Plaza Drive, Suite 570
Alpharetta, GA 30005

RE: DHR Project File No. 2001-01544
Additional Information Received by DHR May 10, 2001
Cultural Resources Reconnaissance Survey of the Proposed Key Largo Wastewater Treatment Plant Site, Key Largo, Florida. By URS, January 2001.

Dear Ms. Colston:

In accordance with the procedures contained in *36 C.F.R., Part 800* ("Protection of Historic Properties"), as well as the provisions contained in Chapter 267.061, *Florida Statutes*, implemented through 1A-46, *Florida Administrative Code*, we have reviewed the results of the field survey of the referenced project and find them to be complete and sufficient.

We note that no historic structures or archaeological sites were located as a result of the above field survey. We concur with the findings and determinations in the report. It is therefore the opinion of this agency that no historic properties are likely to be located within the proposed project area.

If you have any questions concerning our comments, please contact Ms. Robin Jackson, Historic Sites Specialist, by electronic mail at rjackson@mail.dos.state.fl.us, or at 850-487-2333 or 800-847-7278. Thank you for your interest in protecting Florida's historic properties.

Sincerely,

Janet Snyder Matthews

Janet Snyder Matthews, Ph.D., Director
Division of Historical Resources
State Historic Preservation Officer

JSM/Jrj

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 488-1480 • FAX: 488-3355
☐ Archaeological Research (850) 487-2299 • FAX: 414-2207
☑ Historic Preservation (850) 487-2333 • FAX: 922-0496
☐ Historical Museums (850) 488-1484 • FAX: 921-2503
☐ Historic Pensacola Preservation Board (850) 595-5985 • FAX: 595-5989
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

URS

June 5, 2003

Laura Kammerer, Section Administrator
Compliance and Review Section
Division of Historical Resources
R.A. Gray Building, Room 305
500 South Bronough Street
Tallahassee, FL 32399-0250

Subject: Notice of Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County, Florida.

Dear Ms. Kammerer:

This purpose of this letter is to provide your agency with notice that URS Group, Inc., on behalf of the Federal Emergency Management Agency (FEMA), is preparing a Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County, Florida. The Draft SEA evaluates several wastewater management alternatives proposed for Key Largo, and the potential environmental consequences associated with those alternatives. At this time, FEMA requests your comments regarding the range of alternatives (attached). Please note that this attachment represents only a portion of the draft SEA. Additionally, a street map of the project vicinity has also been attached.

In 1998, during the aftermath of Hurricane Georges, Congress allocated additional monies for long-term disaster recovery projects in the State of Florida to assist counties whose needs were yet unmet through allocation of primary disaster relief funds. This Unmet Needs money was earmarked for the counties most impacted by Hurricane Georges, including Monroe County. Monroe County requested that wastewater management improvement projects be considered for disaster funding since many existing wastewater facilities do not provide adequate collection, treatment, or disposal, and thus contribute to degrading water quality in the Florida Keys. Since then, FEMA has received a grant application from the Florida Keys Aqueduct Authority requesting Federal assistance to upgrade the current wastewater treatment facilities on Key Largo.

The National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 through 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10) direct FEMA and other Federal agencies to fully understand and take into consideration during decision making, the environmental consequences of proposed Federal actions (projects). Therefore,

URS Corporation
Eastern Financial Building, Suite 1000
700 South Royal Poinciana Boulevard
Miami Springs, FL 33166
Tel: 305.884.8900
Fax: 305.884.2665

URS

FEMA must comply with NEPA, and other applicable Federal laws and regulations, before making Federal funds available for any disaster recovery and mitigation actions. A Programmatic Environmental Assessment (PEA) for Wastewater Management Improvements in the Florida Keys was prepared in accordance with these regulations, and provides a framework to address impacts of a range of wastewater treatment projects in the Florida Keys. In accordance with 40 CFR Part 1508.28, the Draft SEA for Key Largo tiers from the PEA, and addresses issues specific to this project location.

FEMA respectfully seeks your written comments within 30 days to the letterhead address. If you have any questions or comments, please do not hesitate to contact me at (305) 884-8900, or Ms. Science Kilner, FEMA Lead Environmental Specialist, at (770) 220-5357. Thank you very much for your assistance. Your comments will be considered during the Draft SEA preparation process.

Sincerely,

URS Group, Inc.

Ramon Mendieta
Environmental Scientist

Attachments as noted

cc: Science Kilner, FEMA Region IV, Lead Environmental Specialist
Stephen Carruth, URS Group, Inc., Environmental Planner

URS

June 5, 2003

Dr. Janet Matthews, Director
State Historic Preservation Officer
Division of Historical Resources
R.A. Gray Building, Room 305
500 South Bronough Street
Tallahassee, FL 32399-0250

Subject: Notice of Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County, Florida.

Dear Dr. Matthews:

This purpose of this letter is to provide your agency with notice that URS Group, Inc., on behalf of the Federal Emergency Management Agency (FEMA), is preparing a Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County, Florida. The Draft SEA evaluates several wastewater management alternatives proposed for Key Largo, and the potential environmental consequences associated with those alternatives. At this time, FEMA requests your comments regarding the range of alternatives (attached). Please note that this attachment represents only a portion of the draft SEA. Additionally, a street map of the project vicinity has also been attached.

In 1998, during the aftermath of Hurricane Georges, Congress allocated additional monies for long-term disaster recovery projects in the State of Florida to assist counties whose needs were yet unmet through allocation of primary disaster relief funds. This Unmet Needs money was earmarked for the counties most impacted by Hurricane Georges, including Monroe County. Monroe County requested that wastewater management improvement projects be considered for disaster funding since many existing wastewater facilities do not provide adequate collection, treatment, or disposal, and thus contribute to degrading water quality in the Florida Keys. Since then, FEMA has received a grant application from the Florida Keys Aqueduct Authority requesting Federal assistance to upgrade the current wastewater treatment facilities on Key Largo.

The National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 through 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10) direct FEMA and other Federal agencies to fully understand and take into consideration during decision making, the environmental consequences of proposed Federal actions (projects). Therefore,

URS Corporation
Eastern Financial Building, Suite 1000
700 South Royal Poinciana Boulevard
Miami Springs, FL 33166
Tel: 305.884.8900
Fax: 305.884.2665

FEMA must comply with NEPA, and other applicable Federal laws and regulations, before making Federal funds available for any disaster recovery and mitigation actions. A Programmatic Environmental Assessment (PEA) for Wastewater Management Improvements in the Florida Keys was prepared in accordance with these regulations, and provides a framework to address impacts of a range of wastewater treatment projects in the Florida Keys. In accordance with 40 CFR Part 1508.28, the Draft SEA for Key Largo tiers from the PEA, and addresses issues specific to this project location.

FEMA respectfully seeks your written comments within 30 days to the letterhead address. If you have any questions or comments, please do not hesitate to contact me at (305) 884-8900, or Ms. Science Kilner, FEMA Lead Environmental Specialist, at (770) 220-5357. Thank you very much for your assistance. Your comments will be considered during the Draft SEA preparation process.

Sincerely,

URS Group, Inc.

Ramon Mendieta
Environmental Scientist

Attachments as noted

cc: Science Kilner, FEMA Region IV, Lead Environmental Specialist
Stephen Carruth, URS Group, Inc., Environmental Planner

PROPOSED KEY LARGO WASTEWATER TREATMENT SYSTEM ALTERNATIVES

TABLE OF CONTENTS

1.0 ALTERNATIVES ANALYSIS 1
1.1 ALTERNATIVE 1 - NO ACTION ALTERNATIVE 1
1.2 ALTERNATIVE 2 – NEW WASTEWATER TREATMENT PLANT ON NORTHERN SITE 1
1.2.1 Wastewater Collection System 4
1.2.2 Wastewater Treatment Plant 7
1.3 ALTERNATIVE 3 – NEW WASTEWATER TREATMENT PLANT ON SOUTHERN SITE 10
1.3.1 Wastewater Collection System 11
1.3.2 Vacuum Pump Station 12
1.3.3 Wastewater Transmission System 12
1.3.4 Wastewater Treatment Plant 13
1.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION 14
2.0 REFERENCES 14

List of Figures

Figure 1 Project Vicinity Map
Figure 2 Key Largo Wastewater Service District
Figure 3 Proposed Northern Wastewater Treatment Plant (WWTP) Site Location Map
Figure 4a Typical Building Connection, Plan View
Figure 4b Typical Building Connection, Section View
Figure 5 Proposed WWTP Site
Figure 6 Proposed Key Largo WWTP Preliminary Drawings
Figure 7 Proposed Southern WWTP Site Location Map
Figure 8 Proposed Alternate WWTP Site

List of Tables

Table 1 Service Area Flow and EDU Assumptions

1.0 ALTERNATIVES ANALYSIS

NEPA, CEQ regulations implementing NEPA (40 CFR Parts 1500 to 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10) direct FEMA to investigate and evaluate project alternatives. Alternatives identified in the Monroe County Sanitary Wastewater Master Plan (2000) and in the PEA are evaluated for the proposed Key Largo Wastewater System. In the following sections, three alternatives are considered and evaluated in detail: No Action, New Wastewater Treatment Plant on Northern Site, and New Wastewater Treatment Plant on Southern Site.

1.1 Alternative 1 - No Action Alternative

As discussed in PEA Section 2.3.1 (No Action Alternative), FEMA would not provide funding assistance to the FKAA for the proposed action. To meet Florida Statutory Treatment Standards of 2010, FKAA and service area residents would need to identify another funding source for upgrading currently inadequate wastewater treatment systems.

1.2 Alternative 2 – New Wastewater Treatment Plant on Northern Site

Alternative 2 is described in PEA Section 2.3.2 (Centralized Wastewater Treatment Plant Alternative). FKAA would use FEMA funds to construct a wastewater collection system, vacuum pump station, and wastewater treatment plant (WWTP) that would be located on Key Largo (Figure 1). The proposed WWTP would be designed to meet the Florida Statutory Treatment Standards of 2010 for effluent disposal to shallow injection wells. The new system would serve about 500 land parcels, or about 1,000 people, within the service area.

The proposed Key Largo WWTP would be implemented in two Phases. Phase I of the WWTP would have a capacity of about 150,000 gallons per day (gpd) and would provide new service to residents and business owners in Key Largo Trailer Village (KLTV) and Key Largo Park (KLP). Wastewater flows for residences and businesses in the Phase I service area, obtained from the Monroe County Sanitary Wastewater Master Plan (SWMP; Monroe County, 2000), were used to estimate the number of equivalent dwelling units (EDUs), as summarized in Table 1. Based on estimates of the developed and future EDUs within the Phase I service area, the total estimated annual average service area daily flow (AADF) was calculated as 122,000 gpd (Boyle, 2003). The flow from the developed EDUs is about 104,000 gpd or 85 percent of the plant's Phase I capacity. Consequently, about 18,000 gpd AADF, or 15 percent of the WWTP capacity, is available for future growth. The plant capacity available for future growth is not strictly allocated to the KLTV and/or KLP service areas and could be available to other areas.

The Phase I WWTP has been designed with the potential for expansion in modular increments to the Phase II capacity of 2.25 million gallons per day (MGD). The Phase II WWTP would be capable of serving the entire Key Largo Wastewater Service District that extends from about MM 91 to MM 106.5 (Figure 2).

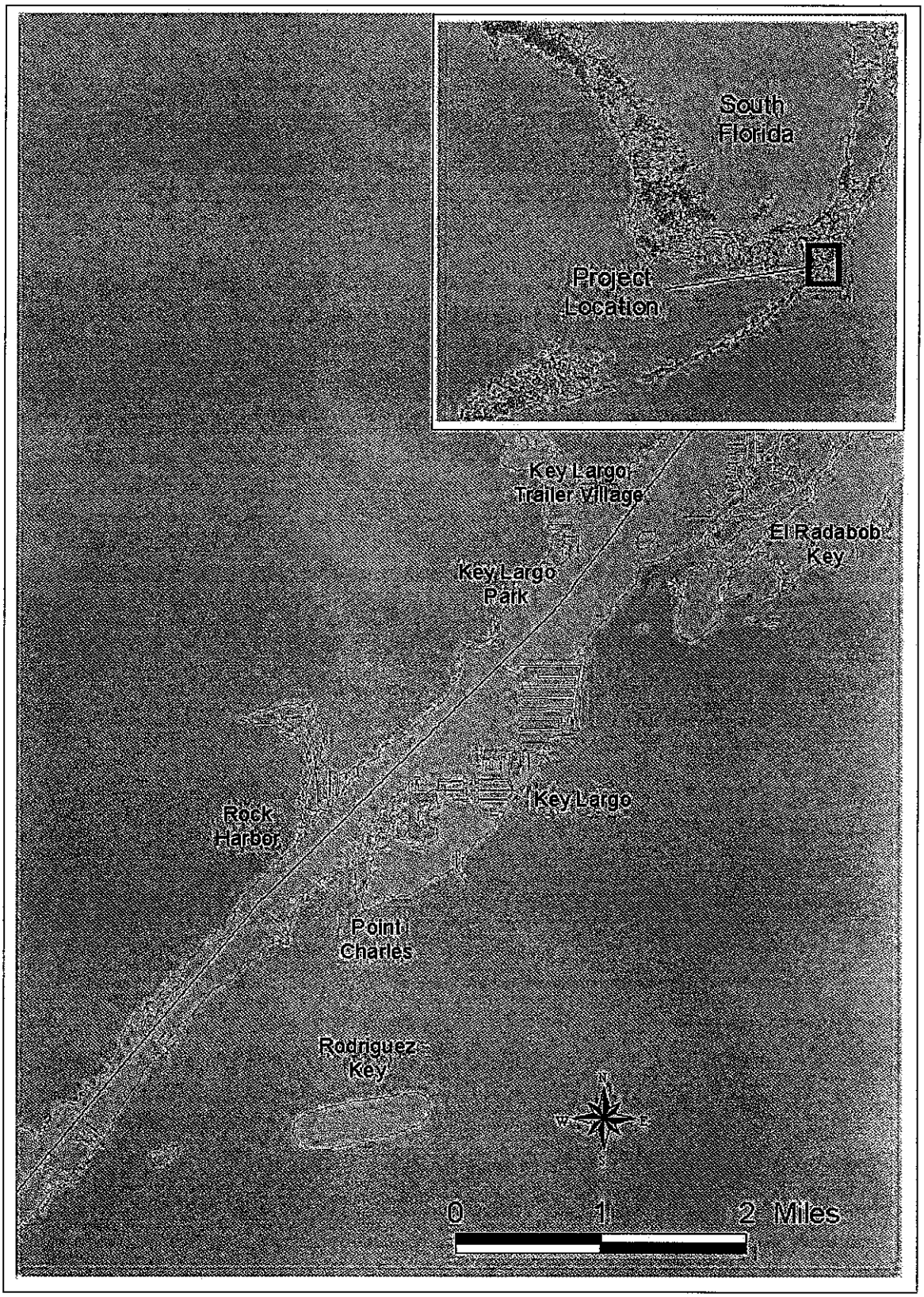


Figure 1. Project Vicinity Map

Table 1. Service Area Flow and EDU Assumptions (Boyle, 2003)

Design Parameter	Units	Key Largo Park Flow Contribution[1]			Key Largo Trailer Village Flow Contribution					Total
					Residential		Commercial		Subtotal	
		Developed	Future	Subtotal	Developed	Future	Developed	Future		
No. of EDUs	N/A	226	57	283	445	5	61	56	567	850
Flow Contribution per EDU @ Maximum Month Average Daily Flow (MMADF)	gpd/EDU	232.5	232.5	N/A	201	201	232.5	232.5	N/A	216
MMADF/AADF Factor	N/A	1.5	1.5	N/A	1.5	1.5	1.5	1.5	N/A	1.5
Flow Contribution per EDU @ AADF	gpd/EDU	155	155	N/A	134	134	155	155	N/A	144
MMADF	Gpd	52,545	13,253	65,798	89,445	1,005	14,183	13,020	117,653	183,450
	Gpm	36	9	46	62	1	10	9	63	127
AADF	Gpd	35,030	8,835	43,865	59,630	670	9,455	8,680	78,435	122,300
	Gpm	24	6	30	41	0	7	6	42	85
Peak Hour/AADF Peaking Factor for Peak Hour	N/A	3.75	3.75	N/A	3.75	3.75	3.75	3.75	N/A	3.75
Peak Hour without Equalization	Gpd	131,363	33,131	164,000	223,613	2,513	35,456	32,550	226,000	459,000
	Gpm	91	23	114	155	2	25	23	157	319
Flow Contribution per EDU @ Peak Hour	gpd	581	581	N/A	503	503	581	581	N/A	540

[1] Key Largo Park EDU count total includes 23 EDUs (20 developed + 3 future) from the Sunset Waterways subdivision.

Build out flow estimates for the Key Largo Wastewater Service District are summarized below:

EDUs	2,430 units
AADF	377,000 gpd
MMADF	565,000 gpd
Peak Hour Flow (PHF)	1,412,000 gpd

About 467 cesspools and septic systems currently utilized by property owners in the Key Largo Phase I service area would be removed. Pursuant to the Florida Department of Health (DOH) requirements, each property owner would be responsible for decommissioning and abandonment of their existing on-site system.

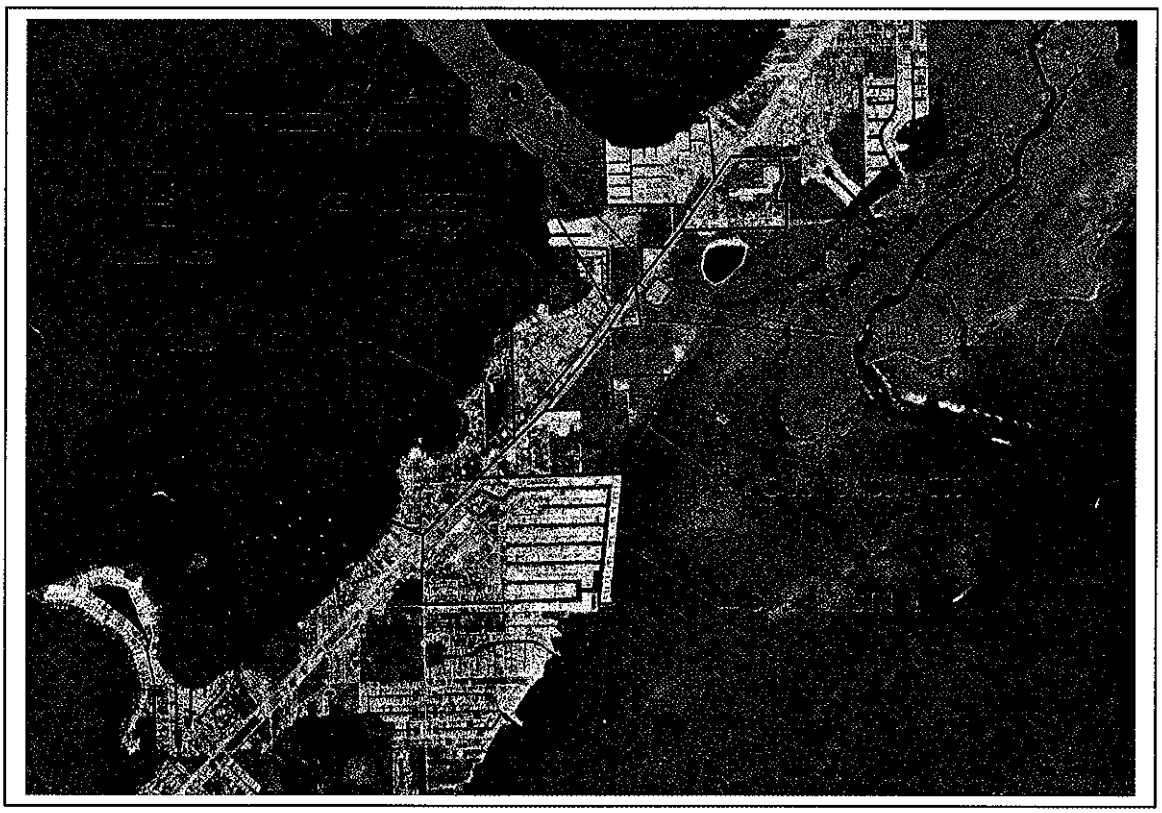


Figure 2. Key Largo Wastewater Service District (Boyle, 2003)

1.2.1 Wastewater Collection System

Wastewater collection mains would be placed within the limits of public road rights-of-way (ROWs) throughout the service area in front of the residences and businesses to be served (Figure 3). The streets within the KLTV subdivision consist of paved roads with platted ROW widths between 40 and 50 feet (FKAA, 2002). Most of the construction would be performed on one side of the road, facilitating maintenance of traffic. In some cases, the wastewater collection mains would be placed on the opposite side of the ROW from an existing potable water main. The service areas on KLTV and KLP would be

served by separate collection systems. Vacuum collection main stub-outs would be provided to the existing residential side streets on the bayside (west) of US Route 1 (US-1) in order to facilitate the future extension of wastewater collection and transmission services to the KLP and Sunset Waterways subdivisions.

A transmission main about 4,800-foot long would convey wastewater from the KLTV to the WWTP. This transmission main would be installed along the north ROW of US-1, and would also serve existing commercial property along US-1. Service laterals consisting of polyvinyl chloride (PVC) pipe would be provided up to the ROW line (Figures 4a and 4b). Property owners would be responsible for constructing individual connections to the service laterals. Special plumbing fixtures or electrical connections would not be required at houses or mobile homes, since existing fittings are adequate. About 1,800 cubic feet of soil would be excavated for the installation of vacuum sewer mains, vacuum pits, buffer tanks, and gravity service laterals. The majority of the excavated material would be used as backfill material for pipe and vacuum pit excavations. Excess excavated material would be used for foundations and grading at the treatment plant site.

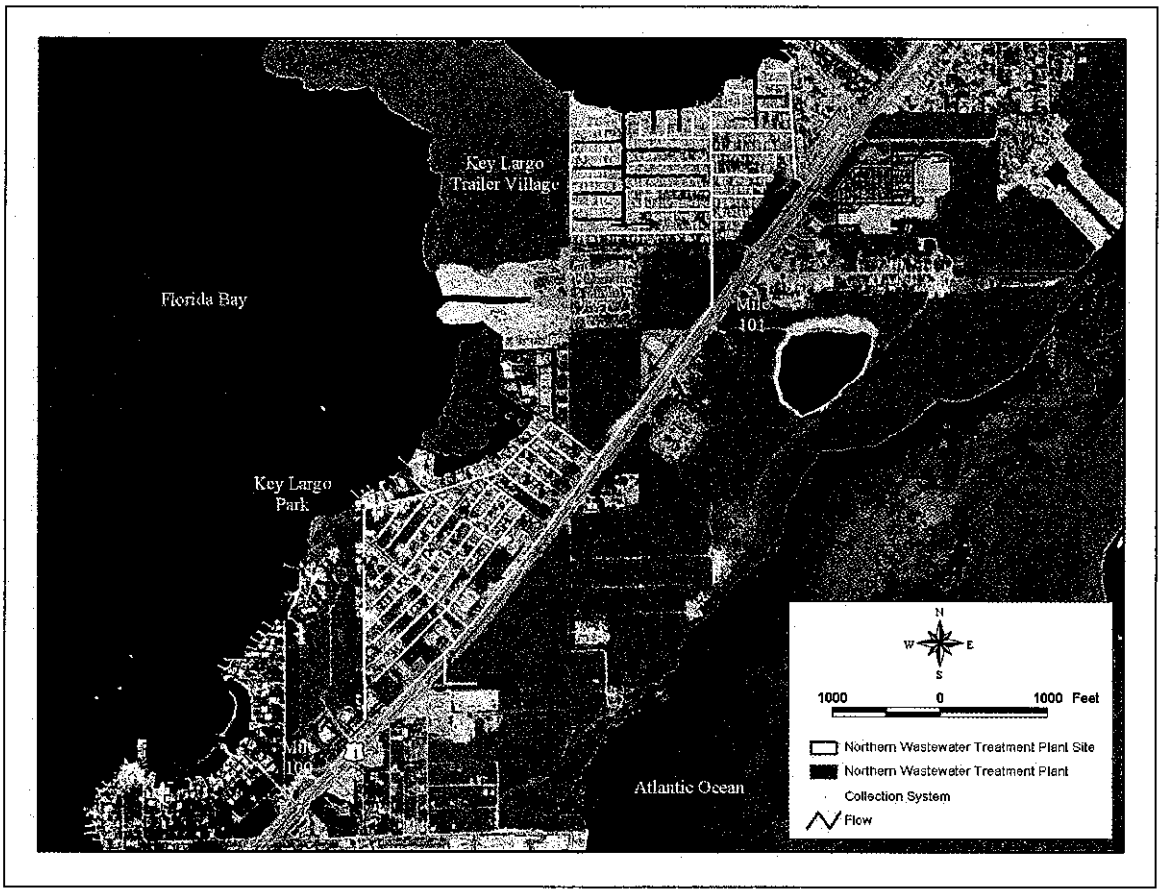


Figure 3. Proposed Northern Wastewater Treatment Plant (WWTP) Site Location Map*

* Arrows represent direction of wastewater flow

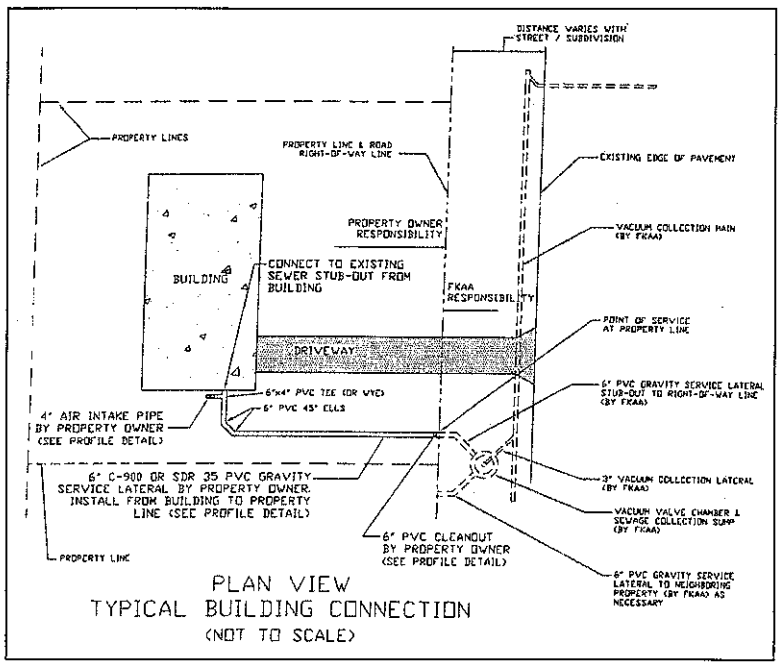


Figure 4(a). Plan View Typical Building Connection (FKAA, 2002)

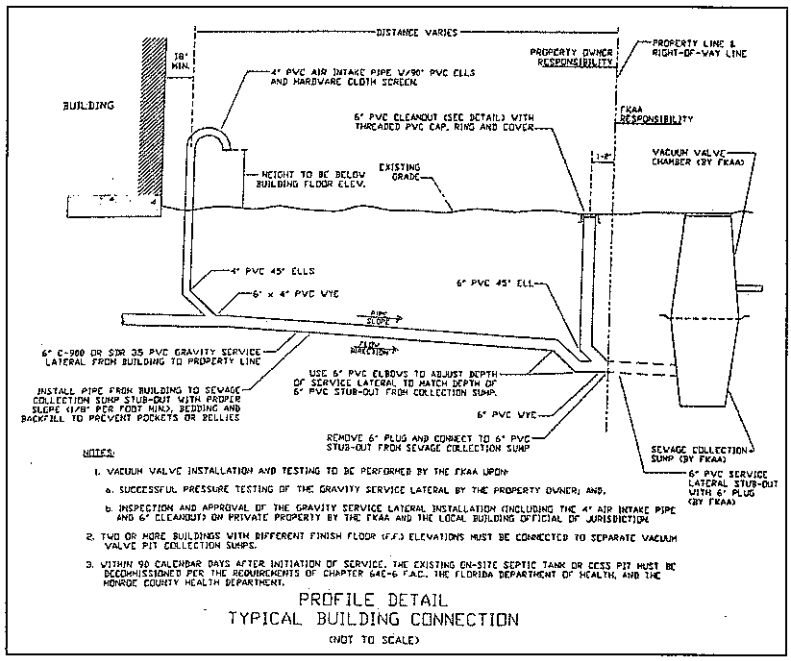


Figure 4(b). Profile Detail Typical Building Connection (FKAA, 2002)

The proposed collection system would consist of a vacuum sewer system with a vacuum pump station (VPS). The vacuum sewer system would be composed of gravity collection mains and/or service laterals, sewage holding sumps and vacuum valve pits, vacuum

collection mains and a vacuum pump station building, as described in PEA Section 2.3.2.1.1 (Vacuum Pumping). Residential sewage would flow by gravity into a vacuum valve pit, the lower portion of which is a fiberglass holding sump, and the upper portion of which includes a vacuum valve. Two or more homes would be serviced by one vacuum valve pit. When wastewater in the holding sump rises to a preset level, a sensor extending from the valve chamber into the holding sump detects the liquid level in the sump, and the vacuum interface valve is pneumatically opened. Differential air pressure propels the sewage from the sump through the valve and into 3-inch or larger PVC vacuum wastewater collection mains. Vacuum mains would be constructed 3 feet below existing elevation throughout the service area. Sewage would then be transported from the collection mains to the wastewater collection tank at the vacuum pump station by the introduction of air into the collection main from successive open/close cycles of the vacuum valves in the system.

A VPS, located within the treatment plant site, would be required to generate the negative pressure necessary on the vacuum collection mains. The station would draw raw sewage through the collection mains and pump it to the treatment plant. The station would be constructed as a slab-on-grade building, between 1,000 to 3,000 square feet in area, and would contain two 430-cubic feet per minute (cfm) vacuum pumps, two 320-gpm discharge pumps, a 6,300-gallon collection tank, and an emergency generator. Discharge pumps connected to the vacuum collection tank would transfer sewage to the treatment plant. The vacuum pumps, operating at about 15 horsepower, could be increased to 75 horsepower as total head conditions increase in the transmission force main due to flows from future wastewater projects in the Key Largo Wastewater Service District. A separate concrete pad external to the station would accommodate odor control equipment (either a vapor phase activated carbon filter or a biological filter) for the treatment of air discharged from the collection tank by the vacuum pump station blowers. Initially the station would have the capacity for the Phase I service area and additional equipment (vacuum and discharge pumps) may be added in the future to expand for service to the entire Key Largo Wastewater Service District.

1.2.2 Wastewater Treatment Plant

The wastewater treatment plant would be constructed on currently undeveloped, Monroe County lands, on the oceanside of Key Largo at MM 100.5 (Figure 5). The proposed plant site is a 1,200-foot wide by 1,600-foot long, 22-acre open space containing high-quality hardwood hammock habitat. About 2.6 acres, in a roughly L-shaped configuration, would be required to construct the WWTP; the remaining 19.4 acres would remain in a natural state. The northwestern property boundary is sited along US-1 and the southern property boundary is adjacent to an existing FKAA facility and undeveloped lands. Private residences are located about 350 feet (0.07 miles) west of the site. The closest water body to the site is the Straits of Florida about 1,500 feet (0.28 miles) east of the site. Florida Bay is located about 2,500 feet (0.47 miles) west of the site.

Figure 5. Proposed WWTP Site
(URS Site Visit; July 31, 2002)

The WWTP would provide primary treatment, biological treatment, solids removal, nitrogen and phosphorus removal, filtration, effluent disinfection and disposal to shallow injection wells (Figure 6). Raw sewage flow from the pump station into the treatment plant would be measured, recorded and totaled by an in-line magnetic flow meter. Influent wastewater screening (either manual or automatic) would remove large particulate matter. Pretreatment screenings would be discharged to a collection hopper or trash receptacle for collection and hauling to a Florida Department of Environmental Protection (FDEP) permitted sanitary landfill facility for disposal (FKAA, 2002). If necessary, alkalinity of the influent wastewater would be buffered using sodium hydroxide, and no excess sodium hydroxide would be discharged to the environment (Garcia, Pers. Comm., 2003). Components of the sodium hydroxide feed system would include storage drums, metering pumps, small diameter PVC piping and valves, and a small containment area with a concrete slab and curb, electrical power and controls. However it is not anticipated that this feed system will be required.

Wastewater would likely be treated using the sequencing batch reactor (SBR) with alum addition and conventional filters, or the upflow sludge blanket filter (USBF) process with aluminum sulfate (alum) addition and conventional filters. Other possible methods of treatment include the modified Ludzak-Ettinger process, Bardenpho process, and the immersed membrane bio-reactor. Two or three parallel process trains, each with equally sized biological reactor systems, would be used so that if one system were out of service the remaining train(s) would be capable of treating the system design flow.

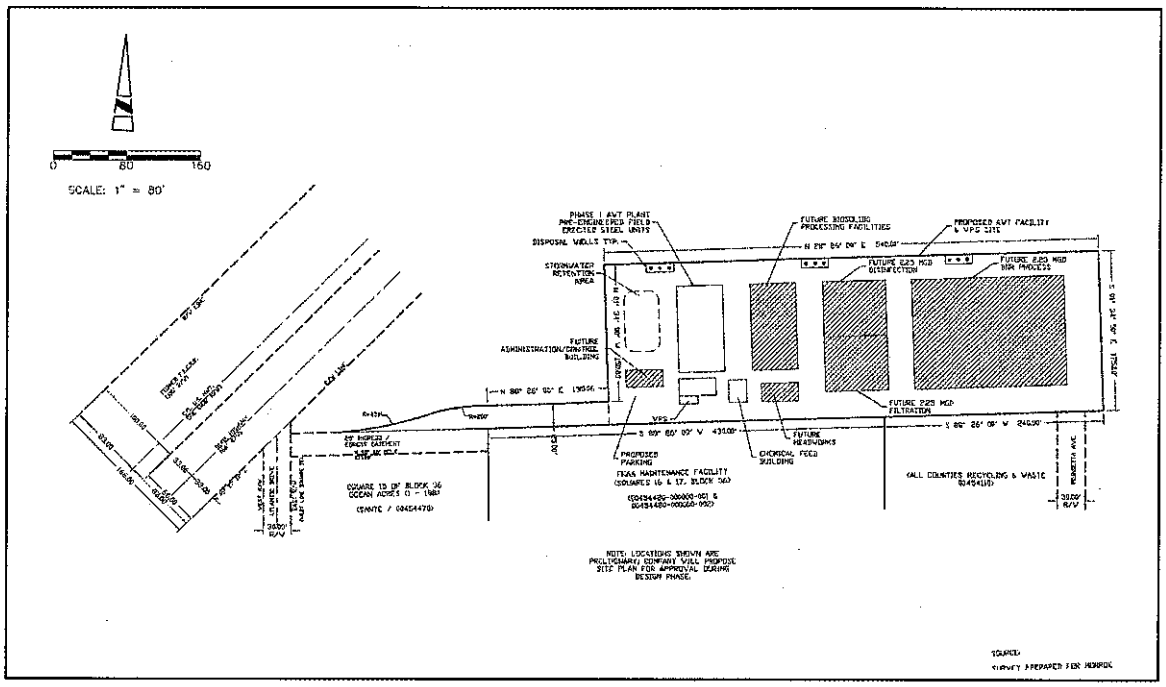


Figure 6. Proposed Key Largo WWTP Preliminary Drawings (Boyle, 2003)

Additional treatment would include the addition of metal salts, such as alum, sodium aluminate, ferric chloride, ferrous chloride, ferric sulfate or ferrous sulfate to reduce the total phosphorus of the wastewater to 1 milligram per liter (mg/L). The alum would be utilized to coagulate excess phosphorus and would be disposed with the decanted sludge (Garcia, Pers. Comm., 2003). Components of a liquid metal salt feed system would include storage drums, metering pumps, small diameter PVC piping and valves, a containment area with a concrete slab and curb, electrical power and controls. Filtration may also be needed to produce effluent with total suspended solids of not more than 10 mg/L, remove soluble effluent phosphorus concentrations in excess of 1 mg/L, and remove unsettled phosphorus precipitate discharged from the settling tank. Two automatic backwashing filter units would be needed. The units would be sized such that, with one filter out of service, the remaining unit would have sufficient capacity to receive flow equal to not less than 75% of the design capacity of the treatment plant.

Effluent disinfection would occur in a disinfection contact tank using one of three methods: calcium hypochlorite tablets or briquettes, commercial grade or on-site generated sodium hypochlorite, or ultraviolet radiation. The effluent disinfection process would consume all calcium hypochlorite or sodium hypochlorite prior to effluent discharge (Madabhushi, Pers. Comm., 2003). Effluent would be disposed by gravity flow into two 8-inch diameter shallow disposal wells, cased and grouted to 60 feet below land surface (bls), with a gravel-packed open hole section from 60 feet to 90 feet bls (PEA Section 2.3.2.2 [Wastewater Treatment Plant Effluent Disposal Options]). Shallow wells would be constructed as part of this alternative and would have a capacity of 400 gpm each. One 3-inch groundwater monitoring well, 10 feet bls cased depth and 30 feet bls

total depth, would also be constructed. Recycle flows, including filter backwash and digester decant, would be directed back to the head of the treatment plant for processing.

Stabilization of residual bio-solids would occur via the aerobic digestion process. The aerobic digester would be equipped with an aeration system used to mix and aerate the residual bio-solids. Decanted sludge residuals would be returned to the plant for treatment; settled solids would be removed from the digester and loaded into a tank truck through a draw-off pipe located near the base of the tank. The fill station would be located to provide easy access by tanker trucks. Decanted sludge would be temporarily stored in an aerated holding tank on-site, and the liquid sludge would be hauled by truck to one of three Monroe County Solid Waste Transfer Stations. Several neighboring municipalities have the capacity to accommodate the expanded waste quantity from Monroe County (e.g., Miami-Dade South District WWTP, Florida City, etc.). FKAA would enter into an agreement with the accepting municipality prior WWTP start-up (Shimokubo, Pers. Comm., 2003). Based on the estimated volume of excess bio-solids generated by the wastewater treatment process and a maximum thickened sludge concentration of 2.0% in the aerobic digester, sludge hauling is estimated to be required once per month using a 5,000-gallon capacity tanker truck (FKAA, 2002).

In addition to the new treatment plant, design elements at the site would include parking and paved access roads, as well as storage space for maintenance equipment, treatment chemicals, and other operations materials. The finish floor elevation of buildings subject to occupancy and structures containing electrical equipment or process equipment would be constructed above the base flood elevation of 8.0 feet National Geodetic Vertical Datum (NGVD). The facility would be operated on a permanent basis and would be automated based on pre-set vacuum and collection tank levels. Station controls would be made resistant to fire, wind, and flood.

The length of time needed for construction, including sewer line placement, would be about 12 months. Construction equipment would likely include a backhoe, trenching machine, bulldozer, crane, pile driver, drilling rig, front-end loader, street sweeper, boring machine and paving machine. Trucks would also be used to transport equipment and materials to and from the project sites. The proposed site would also contain an area that would be used as a temporary staging area for construction equipment and building materials. The lifespan of the treatment plant would be between 30 and 50 years.

1.3 Alternative 3 – New Wastewater Treatment Plant on Southern Site

Alternative 3 is described in PEA Section 2.3.2 (Centralized Wastewater Treatment Plant Alternative). FKAA would apply FEMA funding to the construction of a vacuum pump station at MM 100.5, and a wastewater transmission system (WTS) extending from the vacuum pump station to a new community WWTP at MM 98.0 (Figure 7).

The basis of design for this alternative is similar to that used for Alternative 2. The total estimated AADF for the Phase I service area would be 122,000 gpd, however the ultimate plant capacity would be 2.25 MGD. As in Alternative 2, about 467 on-site septic systems

currently utilized by property owners on KLTV and KLP would be removed. Pursuant to the Florida DOH requirements, each property owner would be responsible for decommissioning and abandonment of their existing on-site septic systems.

The length of time needed for construction, including sewer line replacement, would be about 12 months. Construction equipment would likely include a backhoe, trenching machine, bulldozer, crane, pile driver, drilling rig, front-end loader, and street sweeper. Trucks would also be used to transport equipment and materials to and from work sites. The lifespan of the treatment plant would be between 30 and 50 years.

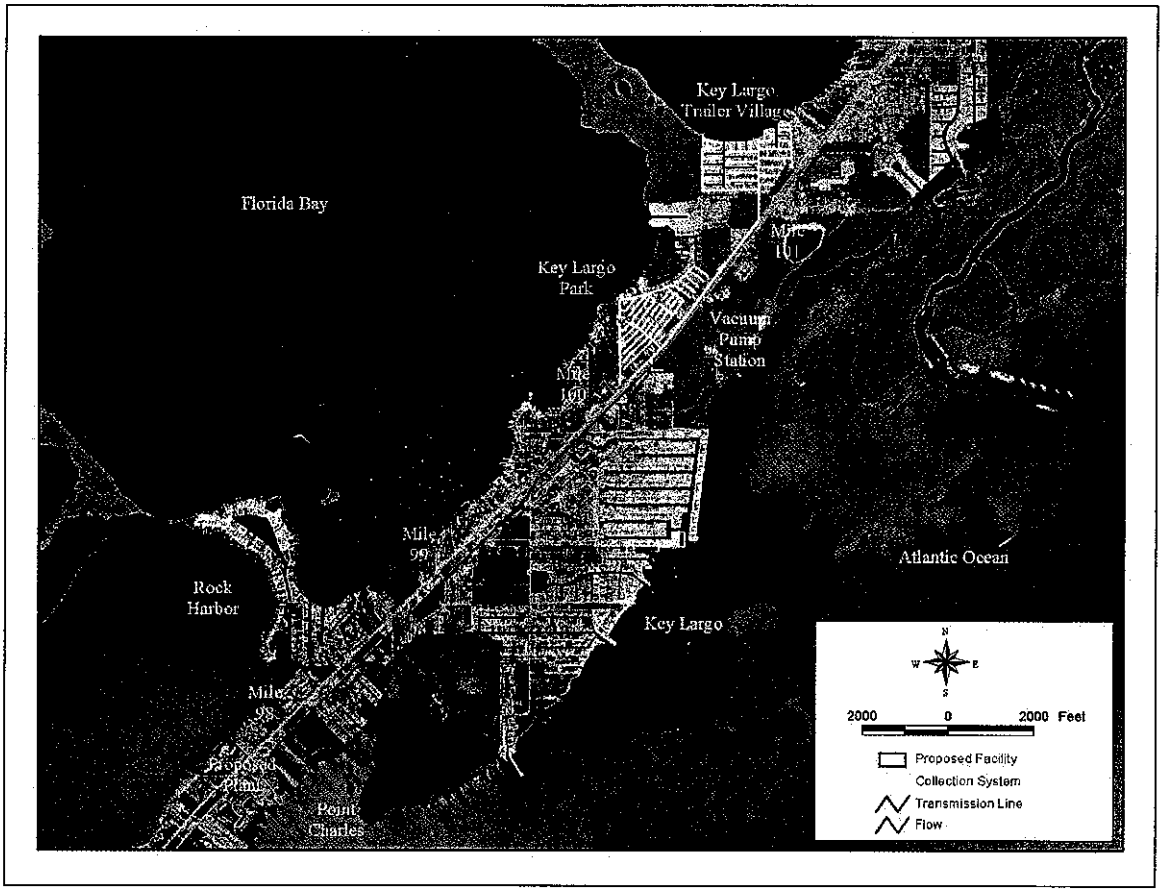


Figure 7. Proposed Southern WWTP Site Location Map*
* Arrows represent direction of wastewater flow

1.3.1 Wastewater Collection System

The collection system would be similar to the one described in Section 1.2.1. The KLTV and KLP would be served by separate collection systems (Figure 1). As in Alternative 2, a force main of about 4,800 linear feet would be required to convey wastewater from the KLTV to the pump station. This facility would be located at the proposed Alternative 2 treatment plant site, and is described further in Section 1.3.2. Service laterals, for connection to the collection system by residents, would be provided up to the property ROW line (Figure 4). As in Alternative 2, connection to the collection system would be

the responsibility of the property owner. Special plumbing fixtures or electrical connections would not be required since existing fittings are adequate.

1.3.2 Vacuum Pump Station

The vacuum pump station would be located at the treatment plant site as described in Alternative 2 (Section 1.2.1; Figure 6). Design elements at the site would include the new pump station, influent vacuum mains, and discharge yard piping, site access, parking, and landscaping. The size of the building would vary between 1,000 and 3,000 square feet, and would contain two 430 cubic feet per minute (cfm) vacuum pumps, two 320-gpm discharge pumps, a 6,300-gallon collection tank, and an emergency generator (Figure 6). Vacuum blowers would create a vacuum of about 16 to 20 inches of mercury (Hg) or 0.53 to 0.67 atmospheres, capable of extracting wastewater from the vacuum valve pits, through the collection mains into the tank. The tank would provide adequate storage to allow the sewage pumps to operate. Vacuum pumps, operating at about 15 horsepower, would be capable of pumping about 320 gpm peak hour wastewater flow rate, with one pump operational at peak hour flow and the second pump serving as a backup. The vacuum pumps could be increased to 75 horsepower as total head conditions increase in the transmission force main due to flows from future wastewater projects in the Key Largo Wastewater Service District.

Wastewater discharge pumps would direct flow accumulated in the vacuum collection tank to the force main transmission system and ultimately to the new WWTP at MM 98.0. Each pump would be capable of about 320 gpm peak hour wastewater flow. Since the pumps would be susceptible to inundation, submersible units would be utilized. To minimize odors, air discharged from the blower exhaust at the vacuum pump station would run through a filter such as an in-ground wood chip bed or packaged iron filings bed before emission. A separate concrete pad external to the station would accommodate odor control equipment for the treatment of air discharged from the collection tank by the vacuum pump station blowers. Initially the station would have the capacity for the Phase I service area and additional equipment (vacuum and discharge pumps) may be added in the future to expand for service to the entire Key Largo Wastewater Service District

The vacuum pump station facility that would permanently house the vacuum pump station would consist of a fixed slab-on-grade building. The finish floor elevation of buildings subject to occupancy, and structures containing electrical equipment or process equipment, would be constructed above the 100-year floodplain level. The facility would be operated on a permanent basis and would be automated based on pre-set vacuum and collection tank levels. Station controls would be made weatherproof against fire, wind, and flood.

1.3.3 Wastewater Transmission System

The transmission main would commence at the pump station and be routed along US-1 to the new WWTP at MM 98.0 (refer to Figure 7). About 13,200 linear feet (2.5 miles) of transmission force main, wastewater pumps, 8-inch force mains, transmission main

valving and appurtenances would be required. About 158,400 cubic feet of soil would be excavated for the installation of the force main. The force main would be located a minimum of 5 feet from the shoulder of the roadway on the south side of US-1. A minimum separation of 10 feet between the force main and water mains is required by FDEP regulations, and clearance from other utilities or structures of at least 3 feet would be maintained to avoid interferences in construction or maintenance. Isolation valves (plug valves) would be placed about 1,000 to 1,500 feet apart for maintenance and troubleshooting. Air release and vacuum valves would be installed at high points in the line and after large elevation differences, as needed.

Force main routing would be expected to be routine (the minimum of 5 feet from the shoulder and consistent line and grade), however the US-1 corridor is well developed and most utilities are routed along this corridor either aboveground on poles, or below grade. Conflicts with existing utilities and structures would be avoided with pipeline deflection. Deflection and adjustments would require additional pipeline fittings, conflict structures, and use of US-1 where additional traffic control and roadway restoration would be required. Approvals for working within the US-1 ROWs would be obtained from the FDOT. Pipeline construction would follow the ROWs of US-1 between MM 100.5 and MM 98. Pipelines would be installed pursuant to typical underground utility installation that includes well bedded high grade PVC pipe with at least 36 inches of properly compacted select fill.

1.3.4 Wastewater Treatment Plant

The wastewater treatment plant would be constructed on currently developed, Monroe County lands, on the oceanside of Key Largo at MM 98.0 (Figure 8). The proposed plant site is a 200-foot wide by 900-foot long, 3.8 acre site, which is cleared, grubbed, and developed and is presently used for boat and vehicle storage, and miscellaneous usage. The western property boundary is sited along US-1; the northern and southern property boundaries border on undeveloped hardwood hammock habitat. The closest private residence is located about 100 feet (0.02 miles) west of the site. The closest water body to the site is the Straits of Florida, immediately east of the site. Florida Bay is located about 1350 feet (0.26 miles) west of the site.

The basis of design and activities for construction of the alternate WWTP would be the same as those detailed for the preferred WWTP in Section 1.2.2.

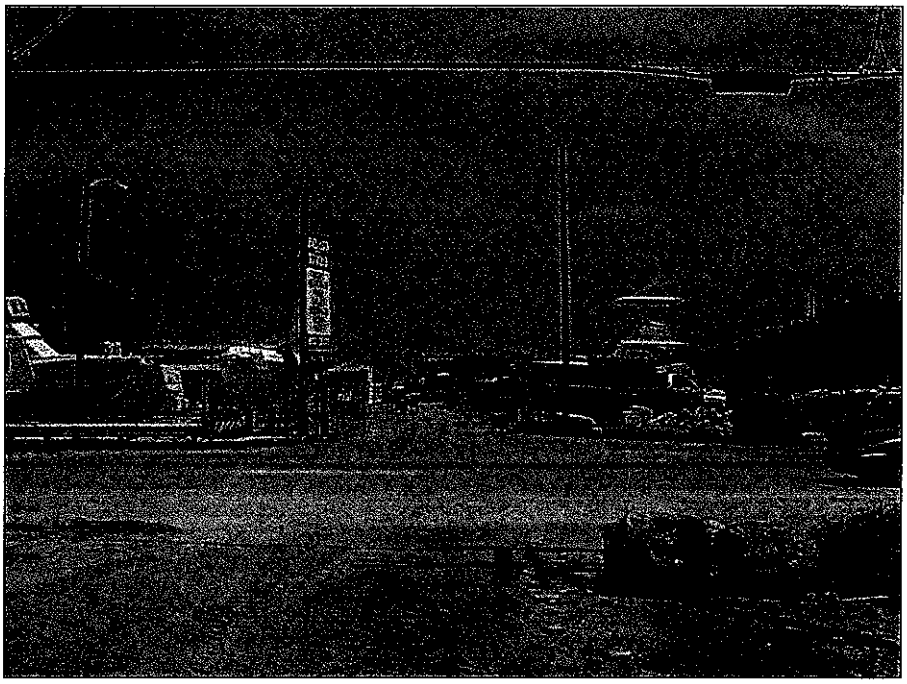


Figure 8. Proposed Alternate WWTP Site
(URS Site Visit; April 24, 2003)

1.4 Alternatives Considered but Eliminated from Further Consideration

A number of alternatives were considered but eliminated from further consideration in PEA Section 2.4 (Alternatives Considered but Dismissed). The preferred and alternate WWTP sites were selected by a resolution of the Monroe County Board of County Commissioners adopted in June 2000. The Alternate Wastewater Management System report for Key Largo Trailer Village (FKAA, 2003) provides detailed information concerning 15 other potential sites in the Key Largo area that were considered for selection.

2.0 REFERENCES

Boyle Engineering Corp. 2003. Key Largo Wastewater Treatment District Key Largo Trailer Village Wastewater System. Preliminary Design Report.

Florida Keys Aqueduct Authority. 2003. Conceptual Design Report, Alternate Wastewater Management System for the Key Largo Trailer Village, Key Largo, Florida.

Florida Keys Aqueduct Authority. 2002. Wastewater Management System for the Key Largo Trailer Village Area, Monroe County, Florida. Basis of Conceptual Design Report.

Garcia, Carlos, 2003. Senior Hazardous Waste Specialist, URS Group, Inc. Personal Communication with Ramon Mendieta, URS Group, Inc.

Madabhushi, Babu. 2003. Wastewater Engineer, URS Group, Inc. Personal Communication with Ramon Mendieta, URS Group, Inc.

Monroe County. 2000. Monroe County Sanitary Wastewater Master Plan. Volume 1. Submitted by CH2MHILL. June.

Shimokubo, Ray, 2003. Wastewater Engineer, FKAA. Personal Communication with Ramon Mendieta, URS Group, Inc.

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Ramon Mendieta
URS Corporation
Eastern Financial Building, Suite 1000
700 South Royal Poinciana Boulevard
Miami Springs, Florida 33166

June 26, 2003

RE: DHR Project File Number: 2003-4954
Received by DHR June 9, 2003
Federal Emergency Management Agency
Notice of Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County

Dear Mr. Mendieta:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

Alternative 1 – No Action Alternative; It is the opinion of this office that this alternative will have no effect on historic properties.

Alternative 2 – New Wastewater Treatment Plant on Northern Site and *Alternative 3 - New Wastewater Treatment Plant on Southern Site*; Based upon comparison with environmentally similar areas of Monroe County, it is our opinion that the possibility of encountering a prehistoric archaeological site at the project locations is sufficiently high to justify a professional archaeological and historical survey prior to any ground disturbing activities.

Since potentially significant archaeological and historic sites may be present, it is our recommendation that, prior to initiating any project related land clearing or ground disturbing activities within the project areas, they should be subjected to a systematic, professional archaeological and historical survey. The purpose of this survey will be to locate and assess the significance of historic properties present. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46, *Florida Administrative Code*, and will need to be forwarded to this agency in order to complete the process of reviewing the impact of this proposed project on historic properties.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433

☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

The results of the investigations will determine if significant historic properties would be disturbed by this project. In addition, if significant remains are located, the data described in the report and the consultant's conclusions will assist this office in determining measures that must be taken to avoid, minimize, or mitigate adverse impacts to historic properties listed, or eligible for listing in the *National Register of Historic Places*, or otherwise of historical or architectural significance.

Because this letter and its contents are a matter of public record, consultants who have knowledge of our recommendations may contact the project applicant. This should in no way be interpreted as an endorsement by this agency. The *Registry of Professional Archaeologists* (RPA) is the national certifying organization for archaeologists. A listing of archaeologists who are RPA members living or working in Florida can be accessed at *http://dhr.dos.state.fl.us/bhp/compliance*. In addition, the complete RPA Directory of Certified Professional Archaeologists is available at *www.rpanet.org*.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick P. Gaske, Deputy SHPO

for Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Ramon Mendieta
URS Corporation
Eastern Financial Building, Suite 1000
700 South Royal Poinciana Boulevard
Miami Springs, Florida 33166

July 22, 2003

RE: DHR Project File Number: 2003-4954-**B**
Additional Information Received by DHR July 10, 2003 SAC 7/22/03
Federal Emergency Management Agency
Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County

Dear Mr. Mendieta:

Our office received and reviewed additional information for the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*.

We note that *Alternative 2 – New Wastewater Treatment Plant on Northern Site* project area has previously been surveyed (*Cultural Resources Reconnaissance Survey of the Proposed Key Largo Wastewater Treatment Plant Site* -#6185). No historic properties were recorded within the proposed project area. Therefore, it is the opinion of this office that Alternative 2 will have no effect on historic properties. We wish to withdraw our survey recommendations of June 26, 2003 for the Alternative 2 project area.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick P. Gaske, Deputy SHPO

for Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☑ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

[redacted] FLORIDA DEPARTMENT OF STATE
Secretary
International Relations
of Elections
ion of Corporations
vision of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

July 22, 2003

Ms. Cassandra Michaud
URS Corporation
7101 Wisconsin Ave., Ste 700
Bethesda, MD 20814
Fax # 301-656-8059

Dear Ms. Michaud:

In response to your inquiry of July 17, 2003, the Florida Master Site File lists no previously recorded cultural resources in the following parcel of Monroe County:

T62S, R39E, Section 06

In interpreting the results of our search, please remember the following points:

- **Areas which have not been completely surveyed, such as yours, may contain unrecorded archaeological sites, unrecorded historically important structures, or both.**
- **As you may know, state and federal laws require formal environmental review for some projects. Record searches by the staff of the Florida Master Site File do not constitute such a review of cultural resources. If your project falls under these laws, you should contact the Compliance Review Section of the Bureau of Historic Preservation at 850-245-6333 or at this address.**

Sincerely,

Neal Engel

Neal Engel, 850-245-6440
Data Analyst, Florida Master Site File
Division of Historical Resources
R. A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

State SunCom: 205-6440
Fax line: 850-245-6439
Email: *fmsfile@dos.state.fl.us*
Web: *http://www.dos.state.fl.us/dhr/msf/*

URS

August 5, 2003

Janet Snyder Matthews, Ph.D.,
State Historic Preservation Officer
Division of Historical Resources
R. A. Gray Building, Room 305
500 South Bronough Street
Tallahassee, FL 32399-0250

Subject: **Supplemental Environmental Assessment and Cultural Resources Assessment, Key Largo Wastewater Treatment System, Monroe County, Florida**
DHR Project File Number: 2003-4954

Dear Dr. Matthews:

This letter is to supply your office with additional information regarding a FEMA proposed Wastewater Treatment System on Key Largo in Monroe County, Florida. A Draft Supplemental Environmental Assessment (Draft SEA) is being prepared, and this document evaluates proposed wastewater management alternatives serving two neighborhoods in Key Largo. Recently, an additional Wastewater Treatment Plant (WWTP) site alternative (Alternative 3) was added to the Draft SEA. The following are the results of a cultural resource assessment for that Alternative and respond to your letter of June 26, 2003.

Pursuant to 36 CFR Part 800.2(a)(3), URS Group, Inc., on behalf of the Federal Emergency Management Agency (FEMA) Region IV, has performed a cultural resource assessment for the Alternative 3 site of the proposed Wastewater Treatment System. The assessment has been prepared in accordance with applicable state and federal standards by investigators who meet *The Secretary of Interior's Professional Qualification Standards*, per 36 CFR Part 61, in the discipline of archaeology.

The purpose of this assessment is to assist FEMA's project planning regarding the proposed wastewater treatment system on Key Largo, to ensure compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA), and to provide your office with information regarding possible impacts to cultural resources. The Alternative 2 site has been previously surveyed for the presence of cultural resources and the results of this work were submitted to your office under separate cover.

URS Corporation
7101 Wisconsin Avenue, Suite 700
Bethesda, MD 20814-4870
Tel: 301.652.2215
Fax: 301.656.8059

Concurrence on the findings of that work was stated in a letter from your office dated May 16, 2001 (DHR Project File No. 2001-01544) and again on July 22, 2003 (DHR Project File No 2001-4954-B).

Project Description

Alternative 3 consists of constructing a WWTP on a site to the south of the Alternative 2 site (Mile Marker 100.5) on Key Largo. The plant would be constructed on currently developed land, on the Oceanside of Key Largo at MM 98.0 (Figure 1). The WWTP, as with Alternative 2, would provide primary treatment, biological treatment, solids removal, nitrogen and phosphorus removal, filtration, effluent disinfection, and disposal to shallow injection wells. In addition to the new treatment plant, design elements at the site would include parking and paved access roads, as well as storage space for maintenance equipment, treatment chemicals, and other operations materials. The service areas, Key Largo Trailer Village and Key Largo Park, are delineated on the attached figure and are the same as those served by the previously reviewed Alternative 2 site. The wastewater collection and conveyance system would be installed throughout the service areas in existing utility or road right-of-ways.

Background Research and Site Visit

Research at the Florida Master Site File, maintained at the State Historic Preservation Office, indicates that there are no known historic properties within Township 62S, Range 39E, and Section 6 (Attachment A). The proposed project is located within this Section. Additionally, there are no historic properties located within one mile of the proposed project area.

URS staff conducted a site visit on April 24, 2003. The proposed plant site is a 200-foot wide by 900-foot long, 3.8 acre site, which is cleared, grubbed, and developed. It is presently used as a boatyard (Figure 2). U.S. 1 runs along the western property boundary; the northern and southern property boundaries border on undeveloped hardwood hammock. The closest private residence is located approximately 100 feet (0.02 miles) west of the site. The closest water source to the site is the Straits of Florida, immediately east of the site. Florida Bay is located about 1350 feet (0.26 miles) west of the site. Boats, trailers, lumber, and other construction debris is strewn about the entire property (Figures 3 and 4).

There is no source of potable water and no vegetation across most of the parcel. No historic features were noted during the visit. No historic properties were noted during the survey and it seems clear that the area had been intensively used during the second half of the 20th century. No subsurface testing was done on this parcel because of the extent of previous surface disturbance from site grubbing and grading.

Findings
Based on the background research and fieldwork, FEMA has determined that the proposed Alternative 3 action will have no affect on historic properties, and respectfully requests your review of these findings and you to return any comments within the next 30 days. All original fieldnotes and site photographs will remain with our office. Although it is not anticipated cultural resources will be discovered should the Alternative 3 site be selected, FEMA's grant approval will be conditioned on the subgrantee halting work should unexpected discoveries be made during construction, including human remains, and consulting with FEMA and your office.

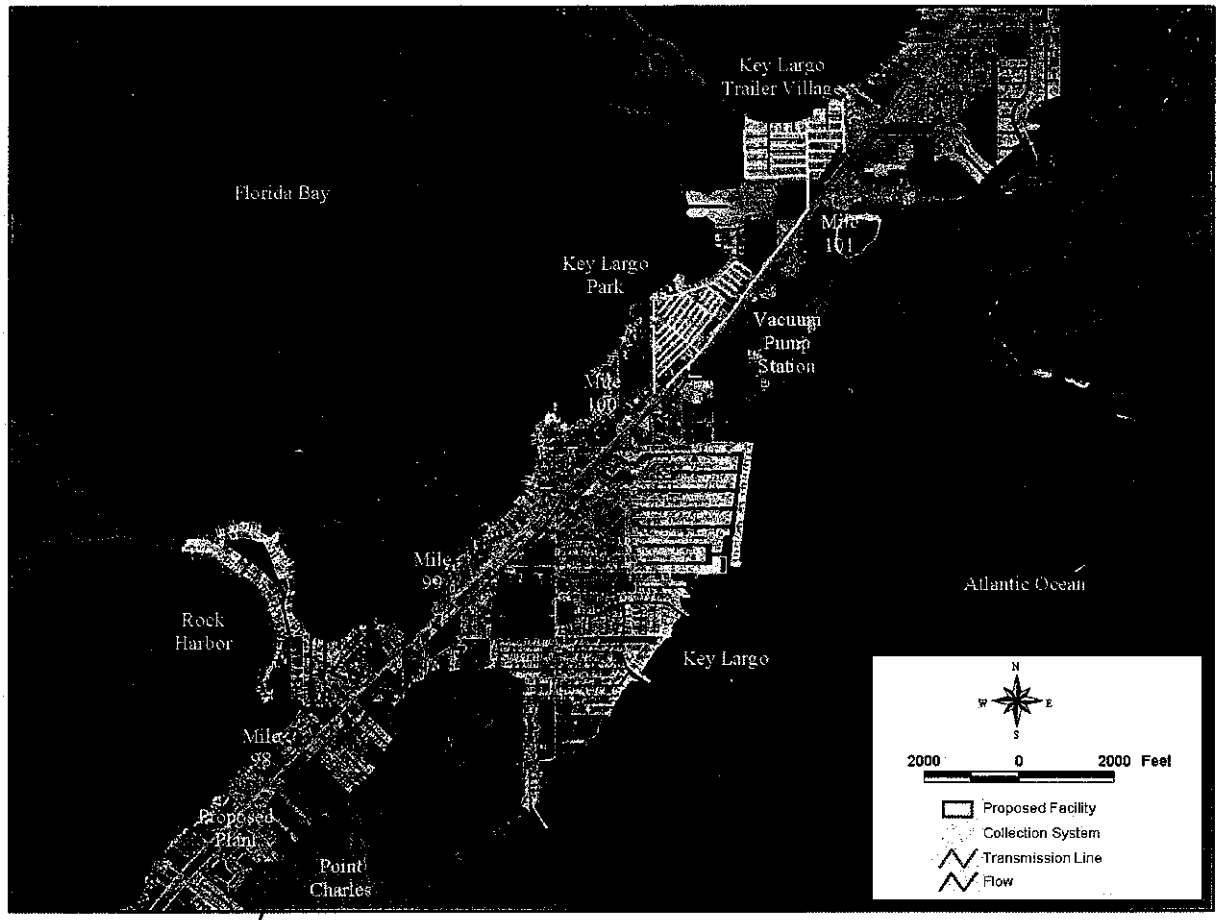
If you have any questions regarding this project, please contact me at 301-652-2215 or Ms. Science Kilner, FEMA Lead Environmental Specialist, at 770-220-5357. Thank you for your continued assistance with this project.

Sincerely,
URS Group, Inc.

Cassandra Michaud
Senior Archaeologist

attachments

cc: Ms. Science Kilner, FEMA Region IV, Lead Environmental Specialist
Mr. Stephen Carruth, URS Group, Inc., Environmental Planner
Mr. Ramon Mendieta, URS Group, Inc., Project Environmental Scientist



Alternative 3 Project Area

CLIENT	FEMA			TITLE	**Project Location Map – Alternative 3**
PROJ	WWTP – Key Largo				
REVISION NO		DES BY			PROJ NO
SCALE		DR BY		URS	FIGURE 1
FILE		CHK BY			

URS

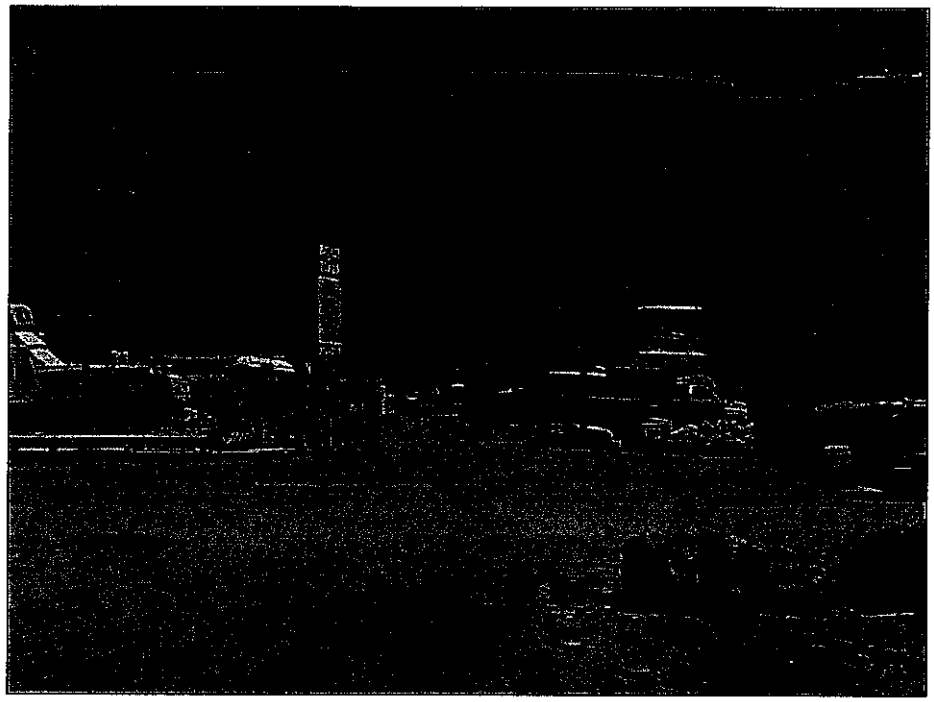


Figure 2: View of Alternative 3 WWTP site taken from across US-1, looking east.

Figure 3: Lumber and other debris present in proposed Alternative 3 WWTP area, looking south.

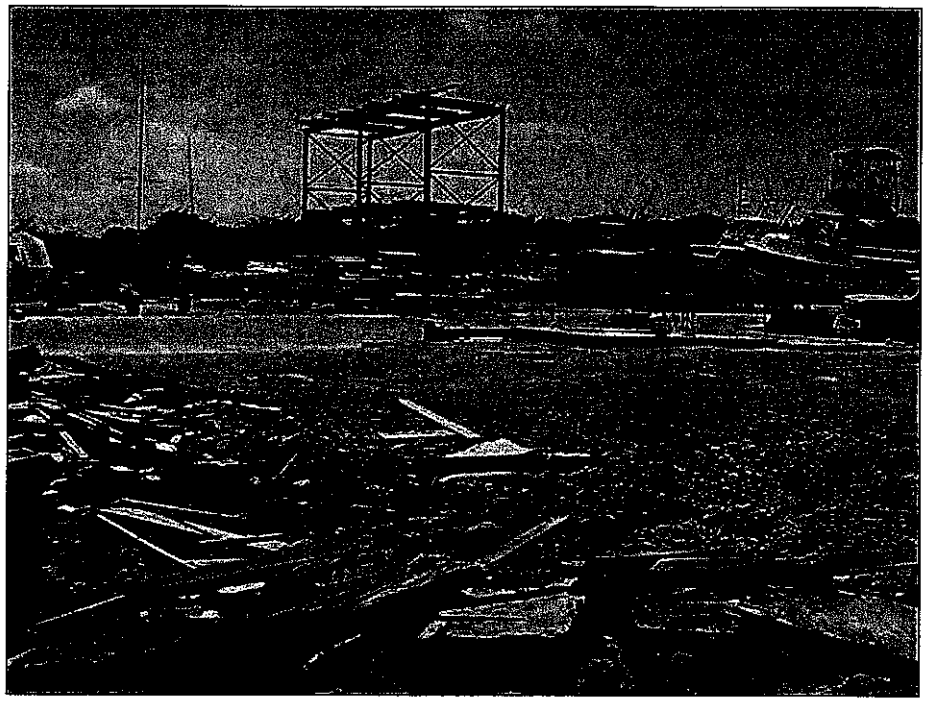


Figure 4: View of proposed Alternative 3 WWTP site, looking south

URS

Attachment A

Site Files Letter

FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. Ramon Mendieta
URS Corporation
Eastern Financial Building, Suite 1000
700 South Royal Poinciana Boulevard
Miami Springs, Florida 33166

August 18, 2003

RE: DHR Project File Number: 2003-4954-C
Additional Information Received by DHR August 11, 2003
Federal Emergency Management Agency
Draft Supplemental Environmental Assessment (SEA) for the Key Largo Wastewater System, Monroe County

Dear Mr. Mendieta:

Our office received and reviewed additional information for the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

Based on the additional information provided by Ms. Cassandra Michaud of your company, it is the opinion of this office that the *Alternative 3 - New Wastewater Treatment Plant on Southern Site* project will have no effect on historic properties.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, by electronic mail *sedwards@dos.state.fl.us*, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick P. Gaske, Deputy SHPO

for Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ **Director's Office** (850) 245-6300 • FAX: 245-6435
☐ **Archaeological Research** (850) 245-6444 • FAX: 245-6436
☑ **Historic Preservation** (850) 245-6333 • FAX: 245-6437
☐ **Historical Museums** (850) 245-6400 • FAX: 245-6433
☐ **Palm Beach Regional Office** (561) 279-1475 • FAX: 279-1476
☐ **St. Augustine Regional Office** (904) 825-5045 • FAX: 825-5044
☐ **Tampa Regional Office** (813) 272-3843 • FAX: 272-2340